



# WETLAND RESEARCH AND EDUCATION IN NATIONAL PARKS OF THE GREAT LAKES REGION

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## ★ GREAT LAKES RESEARCH AND EDUCATION CENTER

The GLREC, located at Indiana Dunes National Lakeshore, is one of 32 learning centers being established in the National Park Service to facilitate park research that assists managers in making science-based decisions on resource issues.

### MISSION

- ❖ TO FACILITATE RESEARCH EFFORTS IN WESTERN GREAT LAKES NATIONAL PARKS BY PROVIDING FIELD STATIONS FOR SCIENTISTS TO CONDUCT COLLABORATIVE ACTIVITIES
- ❖ TO PROVIDE EDUCATIONAL OPPORTUNITIES FOR CITIZENS TO GAIN KNOWLEDGE ABOUT RESEARCH AND PROVIDE EDUCATORS WITH OPPORTUNITIES TO TEACH SCIENCE IN THE PARKS



Each park has unique geology, flora, and fauna. In 1999 an inventory and monitoring program was established to assess park natural resources. University and government scientists assist park staff with the monitoring. Scientists may conduct research on various topics in 11 network parks located in five states.

GLREC staff provide avenues for scientists to conduct park research and develop educational and outreach activities linked to research.

### GREAT LAKES NETWORK PARKS

- ❖ APOSTLE ISLANDS NATIONAL LAKESHORE \*
- ❖ GRAND PORTAGE NATIONAL MONUMENT \*
- ❖ ILLINOIS AND MICHIGAN CANAL NATIONAL HERITAGE CORRIDOR
- ❖ INDIANA DUNES NATIONAL LAKESHORE \*
- ❖ ISLE ROYALE NATIONAL PARK \*
- ❖ KEWEENAW NATIONAL HISTORIC PARK
- ❖ MISSISSIPPI NATIONAL RIVER AND RECREATION AREA \*
- ❖ PICTURED ROCKS NATIONAL LAKESHORE \*
- ❖ SAINT CROIX NATIONAL SCENIC RIVERWAY \*
- ❖ SLEEPING BEAR DUNES NATIONAL LAKESHORE \*
- ❖ VOYAGEURS NATIONAL PARK \*

\* Inventory and Monitoring Program

### WETLAND RESEARCH OPPORTUNITIES IN GREAT LAKES NATIONAL PARKS

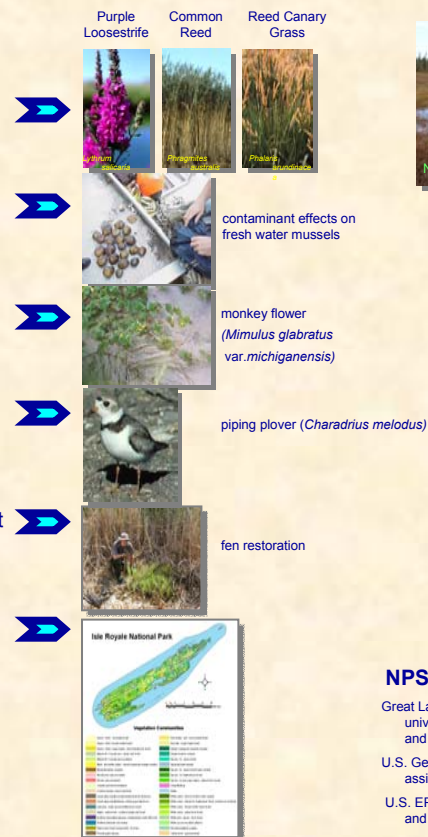
- ❖ Ecology and critical control of exotic and invasive plants and animals in wetlands
- ❖ Globally significant contaminants in sediments, water and organisms in aquatic and wetland habitats
- ❖ Effects of climate and lake level changes on freshwater, coastal wetlands
- ❖ Rare, threatened, and endangered plant populations in wetlands
- ❖ Stopover requirements for migratory birds
- ❖ Population dynamics of Federally listed animal species
- ❖ Role of island isolation and habitat fragmentation on wetland biodiversity
- ❖ Restoration techniques for wetlands and adjacent upland habitats
- ❖ Effects of air pollution (ozone, mercury) across the western Great Lakes wetland ecosystems
- ❖ GIS mapping and vegetation change analysis in park wetlands
- ❖ Wildfire and prescribed fire effects on wetland flora and fauna
- ❖ Native American use of wetlands

### PARK FACILITIES AVAILABLE FOR RESEARCHERS



Renovated houses for lodging and laboratory at each park

- ❖ Offices and conference rooms
- ❖ Laboratory
- ❖ Kitchen/bath
- ❖ Offices with computers & internet access
- ❖ Library
- ❖ Interior storage
- ❖ Tool workshop and storage buildings



### NPS RESEARCH AND EDUCATION PARTNERS

- Great Lakes Northern Forest Cooperative Ecosystem Study Unit – a consortium of universities hosted by University of Minnesota to provide technical assistance and education related to resource management issues.
- U.S. Geological Service Biological Resources Division – provides technical assistance to park managers and conduct natural resource research.
- U.S. EPA Region V – provides guidance on sediment and water quality issues and educational opportunities on the Great Lakes.
- Lake Michigan Federation – works to restore fish and wildlife habitat, conserve land and water, and eliminate toxics in the Lake Michigan watershed through education, research, law, science, economics.
- Chicago Wilderness – A consortium of federal, state, local, profit, and nonprofit organizations that addresses science and policy issues affecting biodiversity in area adjacent to southern Lake Michigan.
- Michigan Technical University, Isle Royale Institute – Provides research and educational opportunities at Isle Royale National Park and Lake Superior.
- Great Lakes Indian Fish and Wildlife Commission – Provides technical and educational expertise in natural resource issues affecting Indian territories adjacent to park lands.



### FOR FURTHER INFORMATION, CONTACT:

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### PARK RESEARCH PERMITS

To conduct scientific investigations in national parks, researchers must obtain a permit. The National Park Service's web page has specific guidelines for permit applications described at

<http://science.nature.nps.gov/research>

### SABBATICALS

Parks also provide facilities to university scientists interested in conducting research during a sabbatical appointment. Information on this program is located at

<http://www.nature.nps.gov/Sabbaticals/>

Scientists work with education and interpretive staff and partners to create educational programs for the public.